SUCCESS STORIES OF RURAL ICTs IN A DEVELOPING COUNTRY

Report of the PANAsia Telecenter Learning & Evaluation Group's Mission to India, involving visits to the Foundation of Occupational Development and the M.S. Swaminathan Research Foundation
November 1999

EXECUTIVE SUMMARY

This report presents the findings of the PANAsia Telecenter Learning & Evaluation Group's Mission to India during November 1999. The purpose of the mission was to perform a comparison and evaluation of the projects being undertaken by each member of the group in respect of the installation and operation of rural telecentres. Given the differing stages of implementation of each project being undertaken by each member of the group as well as the more advanced stage of the two sites visited in India, the mission took the form of a learning evaluation of the Indian sites.

Prior to the mission, it was decided that the group would focus on stories from the telecentre users and operators. Stories, whilst anecdotal, offer a rich picture of the impact of ICT interventions in local, complex and dynamic social settings. They are accessible and verifiable during short visits and they acknowledge the often indirect influence that development interventions have on the behaviour of their beneficiaries. Moreover, stories as evaluation concede that the benefits of telecentre activities are often detectable only after they have been installed, contrary to traditional approaches to information systems, in which expected benefits are usually specified before the technology is installed.

During visits to five village telecentres, one of which acts as an information hub for others, plus one other centre of operations, over a period of 4 days, the mission identified 24 separate success stories. Each story is specific to and reflective of the needs at a particular time of the community in which it was discovered. Each owes its outcome to the sensitive and timely delivery of useful information that contributed to local knowledge which facilitated something desirable for the recipient. The information became available as a direct result of the telecentre. The report describes each story and concludes with some observations regarding the applicability of telecentres to the problems of rural development, the conditions under which desirable

consequences can be experienced, and some implications for future research and development. The report concludes with some lessons learned by the Group regarding telecentres for rural development, telecentre evaluation, research conduct, replicability of successes and future studies.

INTRODUCTION

The PANAsia Telecentre Learning and Evaluation Group (PANTLEG) came together at a Telecentre Evaluation Workshop organised by the IDRC in September 1999 in Val Morin, Quebec, Canada. At the meeting, it was agreed that the group would conduct a learning and evaluation mission to study the two Indian IDRC projects with the purpose of:

- Implementing the lessons learned from the Telecentre Evaluation Workshop held in Val Morin.
- Critically comparing the design, implementation, operation and results of each other's telecentre projects.
- Sharing the results of the mission for the team's mutual benefit.
- Preparing a submission to the Global Knowledge II conference in Kuala Lumpur, Malaysia in March 2000.

Representing the PANAsian IDRC-supported projects that involve the establishment and operation of telecentres, the group consists of:

Renald LaFonde	IDRC, Canada
Bo Goransson	IDRC, Canada
Merlita Opena	Philippine Council for Health Research and Development
Narangerel Dander	DataCom, Mongolia.
V. Balaji	MS Swaminathan Research Centre, Madras (MSSRF)
Loyola Joseph	Foundation of Occupational Development, Madras (FOOD)
Roger Harris	Universiti Malaysia Sarawak

Prior to embarking on the mission, the group agreed on a modus operandi for performing its task. Given the limited time available for the study, which ruled out extensive gathering of data, the group agreed to focus attention on two aspects of

telecentre evaluation. Firstly, the group interviewed users of the telecentres in order to discover a range of typical stories that described instances of telecentre use which were perceived by the users to have led to successful outcomes. Secondly, the group interviewed the telecentre operators in order to discover any success stories concerning operational problems, and the means that were used to overcome them. A debriefing session at the end of the mission summarised the group's experiences. This report briefly describes the organisations visited and their activities and describes each of the success stories discovered by the group. The report concludes with some reflections on the value of the mission and the lessons learned by the group. It offers some observations with regard to the conduct of research into rural ICTs and it presents some suggestions for extending the deliberations of the group for further studies in support of the PANAsia telecentre projects.

The Group assembled in Madras, India on November 24th 1999, and followed the following programme:

November 25th	Tour of MSSRF	Madras
	Visit and discussions at FOOD	Madras
	Visit Thandarai – FOOD	Madras
November 26th	Visit Villianur Telecentre – MSSRF	Pondicherry
	Visit Veerampattinam Telecentre – MSSRF	Pondicherry
November 27th	Visit Kizhur Telecentre – MSSRF	Pondicherry
	Visit Embalam Telecentre – MSSRF	Pondicherry
November 28th	Debriefing – success stories and lessons.	Pondicherry

MS Swaminathan Research Foundation (MSSRF)

MSSRF was established in 1988 as a non-profit trust committed to harnessing science and technology for environmentally sustainable and socially equitable development. With more than 150 full-time scientific and support staff, the Centre has implemented a variety of programmes in coastal systems, biodiversity and biotechnology, ecotechnology and sustainable agriculture, education, communication, training and capacity building. The Centre has implemented a project involving a number of

telecentres in rural Pondicherry in order to establish the impact of information technology in rural areas. The project has the following objectives:

- To set up six Village Information Shops that will enable rural families to access a basket of information using modern communication technologies.
- To train educated youth, especially women, in rural areas to operate Information Shops.
- To train rural youth to organise and maintain a system that generates locally relevant information from generic information
- To maintain, update and disseminate information on entitlements to rural families using an appropriate blend of channels.

At the time of the PANTLEG mission, MSSRF was operating four Village Information Shops and one Value Addition Centre, which acts as a hub for the others. The Value Addition Centre has dial-up accounts to two Internet Service Providers (ISPs); the Village Information Shops have off-line wireless access to e-mail and the World Wide Web, via the Value Addition Centre. Population figures for the locations visited are as follows:

Village	**Population**	
Kizhur	125	
Veerampattinam	706	
Embalam	395	
Villanur	18074	(The Value Addition Centre)

During 1999, usage of the village telecentres was as follows:

Type of use	**%**
Agricultural and fisheries	5
Educational	12
Employment and training	7
Health	3
Government and entitlements	45
Personal telephone calls	25
Programme related telephone calls	3
	100

From data maintained by the operators, the information shops averaged around 150 visits from users per month. Around 16% of these were women and nearly 3% were illiterate, whilst 18% were from families classed as asset-less and 7% were children below age 14. Users are charged one rupee if their enquiry involves a local call. If their enquiry only involves an access to locally held information, they are not charged anything.

Foundation of Occupational Development (FOOD)

FOOD is an NGO that has evolved over 20 years, creating opportunities for employment and enterprise development. Over the past four years, FOOD has taken on the role of a value-added ISP by establishing electronic networks in remote sites to enable other NGOs and community-based organisations working in remote, rural and tribal areas to network with like minded organisations within the region and with national and international NGOs and partner organisations. The objectives of the networking project are:

- Networking of development agencies in remote areas with limited or no access to electronic communications, thus facilitating communities to improve their quality of life for equitable and sustainable development.
- To promote collaboration in research and development through information access.
- To facilitate use and exchange of information through electronic communications and access to databases and databanks to enable NGOs and institutions to share knowledge.
- To offer e-mail, bulletin board and conferencing facilities.
- To concentrate on networking content for sharing and providing support for regional internet information hosting in support of distribution and utilisation of information arising from research carried out in the region.
- To involve experimentation, pilot studies and other practical networking activities using wireless technology that could create replicable results and have useful application throughout the region.

FOOD operates a 64kbps host connection to India's primary ISP, VSNL. Fourteen sub-hosts have been connected to the FOOD host and these are provided with technical and content support by FOOD's 7 staff. Each sub-host has between 100 and

300 users, which are mostly NGOs. Eleven individual telecentres have been created within this network. FOOD provides the sub hosts computers and communications equipment until they become self-supporting, which requires around 100 users, and it trains the sub host staff as well as promoting the use of networks in the sub host's region and providing day-to-day support for the operations.

SUCCESS STORIES

IndiaShop

FOOD has established an on-line supermarket that specialises in the sale of local products made by village crafts people. The FOOD staff advise producers on marketing, pricing and packaging and, so far, around 100 cottage industries are preparing to participate in this electronic market. The organisation is also experimenting with the concept of tele-marketing using the internet to bring IndiaShop to the notice of potential customers. Purchases are transacted through major credit card companies. A novel means of rewarding tele-marketeers that is being tested is to share with them the commission that the credit card companies charge. Tele-marketeers can operate from their own computers, and in their own time. The ordering system tracks the source of the order so that commissions are correctly assigned. Shortly after launching the service one village producer in a village called Kancheepuram sold a hand-embroidered silk sari which she had spent 60 days working on for US$1,100, far more than she would have earned by selling it to a shop in Madras. IndiaShop offers market outlets for indigenous craftspeople as well as marketing opportunities for marketeers who can work from any networked computer.

Education Software

FOOD has developed software for use by a teacher of a class of students learning the English language. The software teaches pronunciation by depicting letters of the alphabet whilst simultaneously playing back its correct pronunciation recorded by a native English speaker. English, which is highly regarded for job advancement, is rarely learned from a native speaker in India, leading to poor pronunciation. The software does not assume an individual user, but supports the teacher in class mode, enabling large numbers of students to benefit in a single sitting. It lessens the tedium

for the teacher in the repetitive coaching necessary for correct pronunciation, whilst increasing the quality of the learning experience. The application has potential anywhere English is taught and where there is access to a multimedia computer.

Internet Kiosk

The Internet Kiosk concept is brokered by FOOD as a means of making e-mail available to anyone. Any individual can visit a kiosk, which is fitted with a telephone, and dictate an e-mail message and the address over the phone to the nearest telecentre. In some cases, voice mail is used by the telecentre in order to provide a 24-hour service. The kiosk operator charges a fee, usually around one rupee, and makes a profit on each message. The telecentre charges the kiosk and also dictates incoming e-mail messages back to the kiosk operator, who, in some cases, writes it out and delivers it to the receiver. E-mail is therefore available to anyone with access to an internet kiosk, and small operators can enter the telecentre business with a minimum investment. When the scheme began, around 50 telephone booth operators enrolled in it. However, the end-users seemed to find it difficult to adapt to voicing an e-mail message on a telephone. Many operators perceived that the users felt that it was not e-mail if there was no computer visible to them in the process. Consequently, traffic volumes did not achieve expectations, and of the 50 original subscribers, around 10 remain in the scheme, servicing only a handful of messages weekly. Despite these difficulties, the scheme is included here as a partial success with the apparent lesson that human factors play a critical role in technology adoption. The approach to diffusing access to ICTs still seems to carry potential if these factors can be successfully addressed.

Herb Gathering and Cultivation

The village of Thandarai in the Union Territory of Pondicherry formerly earned a living from the collection of snakes in the surrounding bush country and the sale of their skins. Environmentalists were alerted to the possible extinction of the local snake species. A UK NGO, Womankind Worldwide, discovered that the village inhabitants had considerable knowledge of the local herbs; one shepherd youngster could identify 360 separate species of herbs and knew how to use them to treat the sheep for a variety of ailments. The village established a telecentre and, with connectivity support from FOOD, used it to learn how to package and market the

herbs that they found in the surrounding countryside. The village now has several buildings that contain the telecentre with a prodigious library on herbs and a burgeoning herbal processing centre. Around 300 women from the surrounding district are engaged in the herb preparation process, and there is a concerted effort under way to record the local knowledge about herbs, from which a book is being planned. The telecentre service was instrumental in sensitising the villagers to the value of their knowledge and in stimulating them towards using it as a means of obtaining their livelihood.

Value Addition Services

Both FOOD and MSSRF acknowledge that the mere provision of connectivity is insufficient in delivering informational benefits to their rural clients. Both organisations have instituted formal mechanisms for adding value to the connectivity they provide for pro-actively searching for useful information and delivering it to users in a useable format. FOOD's IndiaShop and Internet kiosks are examples where the connectivity provider has developed content. The provision of operator training and technical support also adds value to the connectivity. At MSSRF, one of the telecentres, at Villianur, acts as a Value Addition Centre. In this capacity, it serves as the informational hub for, currently, four other telecentres. In this way, costs were reduced by avoiding the provision of full Internet access to all the centres. Information needs are identified at each centre and transmitted to Villianur via e-mail across the wireless network. The staff at the Villianur centre then track down the required information and transmit it back to the centres by e-mail and e-mail attachments, which are sometimes in the form of digitised audio voice messages. Standard information requirements are despatched in the form of a newsletter or as voice messages that are compiled and transmitted daily. Results of requests for information from one centre are often propagated to useful effect back to all the centres. The "hub-and-spoke" mode of operation for the MSSRF centres provides mutual support and learning opportunities as well as fostering partnerships with information brokers, both researchers and project staff, who act in a creative and pro-active manner in developing information channels that can deliver benefits to their rural clients.

Local Language

A major contributory factor to all operations at the MSSRF telecentres is the use of Tamil language and Tamil script in the computers. Despite their being no standard for the representation of Tamil in software, the project staff have been able to develop the use of standard Microsoft Office applications in Tamil script. Moreover, the applications are operated in Tamil using a western, Roman script QWERTY keyboard. The operators have learned the appropriate keyboard codes for the Tamil characters and are quite proficient at data entry. Beyond the entry of data, it cannot be underestimated the extent to which the use of Tamil language has promoted the use of the telecentres and fostered interactivity and engagement between the various information systems that are available and their intended beneficiaries.

Sea Conditions

The MSSRF Value Addition Centre at Villianur delivers daily images obtained from a web site run by the US Navy of the predicted wave conditions in the Bay of Bengal to the centre at Veerampattinam. The villagers there are fisher folk, and the sea conditions are of crucial interest for their safety. The information is so critical that it is transmitted verbally across a public address system from loud speakers on the roof of the centre to the fishermen as they are preparing their boats in the early morning. "It saves lives" said one respondent when asked about its usefulness.

Fish Finding

Similar to the sea conditions, the fishermen at Veerampattinam have been able to locate a source of information that informs them of the whereabouts of the shoals of fish that they seek. The information is fresh enough to be useful to help them in their daily fishing expeditions.

Fishermen's Housing Loans

One of the tasks of the MSSRF Value Addition Centre is to seek out and publicise the various entitlements for which community members may be qualified to obtain. Over 100 such entitlements have been identified so far and it has become a highly complex task for individual families to understand what they entitled to and how to go about obtaining the benefit. One such entitlement of particular interest to the villagers at Veerampattinam is the Fishermen's Housing Loan, a government-subsidised scheme

for providing low cost loans to fishermen for the purpose of buying or constructing a home. Prior to the advent of the telecentre, nobody in the village had any knowledge that the scheme existed. Now, nearly every fisherman in the village has benefited from the scheme.

Notebook Charity Scheme

The school at Veerampattinam was able to make contact with a charity scheme whereby 180 notebooks were provided free to students.

Bus Trip Planning

A regular source of useful information is the schedules of the many bus services that operate in the districts in and around Madras and Pondicherry. Village travellers find that they are able to plan their journeys, often involving several connections with overnight stays, so that they are able to reduce the time spent waiting to catch connecting services. It is the nature of low-income rural households that time lost usually equates with lost income, or the accumulation of duties that have to be performed at a later stage. As for any busy working person, saving time represents a real benefit.

Cataract Operation

The MSSRF telecentre at Kizhur discovered a health camp, a scheme for free medical treatment, at a hospital more than 400 kilometres distant. The camp was offering, for a limited period, free cataract operations. Several people in the villages with telecentres applied and were given operations.

Incense Manufacture

A group of ladies in Kizhur village decided they wanted to start a small business enterprise manufacturing incense sticks. They began as sub-contractors but their confidence and enterprise grew as a result of utilising the telecentre. As a result of some searches by the telecentre operators, they were able to develop the necessary skills for packaging and marketing their own brand name incense. The ladies were quickly able to develop local outlets for their products and they are confidently using the telecentre to seek out more distant customers. The telecentre facilitates small

entrepreneurial activity and mobilises latent productive capacity among women who live in a culture that has traditionally tended to marginalise them.

School Exam Results

The schools in and around Pondicherry release their exam results shortly after they become available, but it takes the local newspapers up to two weeks to publish them. The Value Added Centre has been able to obtain the results and it transmits them to the village telecentres within 24-hours of release. Parents and pupils queue for several hours at the telecentres to receive the results, something they are prepared to do in preference to waiting for the newspapers. This type of social benefit would probably not register in most contemporary designs of benefit measure, focussing as they do on economic returns, yet the willingness to queue for the results testifies to its desirability.

Procurement of Quality Seeds

Like all farmers, the villagers served by the MSSRF telecentres require high quality seeds for the fruits of their efforts to achieve their maximum potential. The telecentre at Kizhur performs an important function in locating suitable sources of quality seeds and ensuring adequate supplies for the farmers at the time when they need them. Prior to the installation of the telecentre, securing an adequate and timely supply of quality seeds was a highly unreliable process, and it led to significant variations and uncertainties in the crop levels. The telecentre therefore contributes to food security.

Veterinary Services

Access to health care works for animals as well as people. One farmer discovered late at night that his cow was seriously ill. It seemed that if the cow didn't receive treatment within a few hours, it would most probably die. The farmer was able to summon help from the telecentre staff who searched their networked information sources for a veterinary surgeon who would was close enough to apply treatment within a short time. The surgeon was contacted by telephone and he arrived in time to save the cow.

Grain Prices

In the village of Embalam, local farmers are able to obtain the market prices for their produce on a daily basis from the village telecentre. There are two prices to obtain; one from the government market, which fluctuates little, and another from the private market, which tends to swing much more. Consequently, there is considerable benefit from choosing which market to deliver produce to and in monitoring the differences between the two prices on daily basis. The farmers consistently obtain the best possible price for their produce.

Doctor Appointments

Visiting distant doctors for rural dwellers usually involves long journeys and long waits on arrival, with resultant loss of productive capacity. Using the services of the telecentre, villagers are now able to book appointments with doctors and therefore they can save much of this wasted time.

Private Tuition

At the Embalam village telecentre, an enterprising local school teacher has started using the computer facilities to provide additional after-hours tutoring for local school children, a service for which he charges. Considering the service a community benefit, the telecentre manager initially allowed the teacher to use the computers free of charge, but seeing that the teacher was profiting from the service, whilst the children had to pay, the manager decided to start charging the teacher provided he reduced the charge to the children. Thus, both the teacher and the telecentre benefited and the children enjoyed the value of the extra tuition.

Insurance

Through the information services of the telecentre, villagers discovered a national life insurance scheme that is subsidised by the government and operated by a local insurance agent. The agent had done little to publicise the scheme and the villagers did not know whom to approach. The telecentre network was mobilised to obtain further information regarding the entitlements and the name of the agent. As a result, the villagers were able to approach him directly with sufficient confidence to enable them to make their applications and to receive their entitled insurance policies. Furthermore, the local telecentre operator devised and implemented a database that

generates a premium renewal advice for every household covered by the scheme and this is used to ensure that no insurance policy lapses for the want of a late renewal payment. The policy is so advantageous to the village folk that every household in Embalam village has taken one out and they are confident that their coverage will be continuous and that premiums will be renewed in time.

Employment Opportunities

An agricultural processing factory about five kilometres from Embalam was recruiting and one of the telecentre volunteers heard about it. As the factory was seeking women applicants, and the volunteer was a woman, she was keen to bring the employment opportunities to women in her village. She therefore distributed the information via the telecentre network. The factory was able to fill its vacancies much quicker than expected and henceforth, on hearing about the telecentre network, the factory has decided to use it as their channel of first choice to obtain local labour. Such a partnership represents a win-win situation with benefits accruing to both parties. The factory accesses a steady supplier of labour quickly and cheaply, and the villagers get first look-in when job vacancies arise.

Savings Co-operative

Village women learned about the concept of savings co-operatives through their interactions with the telecentre information sources. In India, savings co-operatives are a popular means of obtaining loans for people who would not normally qualify for a loan from a bank. The co-operatives work by members making regular payments to the scheme, and then borrowing money from it when the need arises. Members are allowed to draw a loan that exceeds the value of their contributions, and new members can borrow even before they have commenced payments. The popularity of the scheme is derived in part by the support they receive from the government. Under certain qualifying conditions, registered savings co-operatives are entitled to receive government loans at interest rates well below prevailing market rates. Local banks are required by law to provide banking facilities to registered savings co-operatives. Having discovered the scheme through the telecentre, the village women in Embalam formed a co-operative and they use the telecentre computers to administer the accounts. One of the telecentre operators, a woman, acts as the co-operative treasurer and secretary, utilising the telecentre facilities.

Herbal Remedies

Villagers in the MSSRF study area, as in most rural communities throughout the developing world, possess considerable knowledge about herbal remedies that can be derived from the herbs to which they have local access. One of the telecentre initiatives is directed towards building a database of such remedies, recording the characteristics of the plant, methods for collecting the herbs, techniques for preparing the remedy, applicability and dosages. The database, which is accessible by other villages, is seen as a valuable resource for several reasons. Firstly, is can be consulted by anyone with the need of a remedy for which a known herbal treatment is available. Secondly, it is a means for recording indigenous knowledge which is held in many cases by old people, and which can therefore be recorded before it is lost. Thirdly, recording such knowledge has been demonstrated to be an effective weapon to fight against the usurping of local knowledge by foreign interests who attempt to patent the crucial ingredients of indigenous bio-resources in their own country. In one instance, some non-resident Indian chemists in the USA attempted to patent the specific ingredients of a strain of coriander that was well known by local people living in the area from which the herb was taken. Sympathetic lawyers challenged the patent, citing the local knowledge, which had been recorded, and were successful in having it revoked. Villagers in the MSSRF study area are highly sensitised to the possibility of such plundering of local resources by foreigners, and they are highly motivated to use whatever means are available to them to protect what they consider to be theirs.

Operations Staff

The final success story relates to telecentre operations staff in the MSSRF telecentres. A variety of factors accumulate to render an impressive profile of an efficient and effective workforce. Firstly, the operators are unpaid volunteers yet they display considerable dedication, skill and enthusiasm as well as empathy with the telecentre users and objectives. Telecentre service is maintained through long hours during every working day and staff diligently keep logs of every user request and almost every other event. The educational level of the staff is generally modest, most having attained lower to middle secondary schooling. Nevertheless, it is evident that they possess considerable IT literacy, not to say information fluency, in the ease with which they are able build web sites, manipulate e-mail and multimedia and other

common software packages. An additional characteristic of the operators, which has relevance in the local context, is that they are mostly women. One of the telecentres is operated entirely by women. A secondary effect of this gender bias is that women, who are traditionally marginalised in much of Indian culture, find confidence when they need to use the telecentres by not having to work with men. This confidence factor is amplified for the operators themselves, who seem to acquire a substantial elevation in their status through their position. Yet another apparent effect is the increased number of health-related enquiries that the telecentre receives when women operate it. This observation prompted one centre to alternate women operators with men, morning and afternoon, which increased the volume of health related enquiries.

DISCUSSION

The PANTLEG mission was tasked with evaluating the telecentres that it visited. As an intermediate task, it was decided that the Group should summarise its encounters with the telecentres for each of the project organisers, FOOD and MSSRF. These summaries were presented verbally to representatives of each organisation at the end of the mission, and they are outlined in the following sections.

FOOD

The Group characterised the Foundation for Occupational Development as a Value-Added ISP. It sub-leases internet access to qualifying organisations and assists those organisations in making effective use of it, in ways that are consistent with FOOD's development philosophy. The concept appears as a novel form of NGO in the field of communications for development and it is differentiated from both ISPs and from cybercafes by the value-added component. The implementation of the concept is to be complimented, demonstrating as it does, considerable creativity and flare as well as managerial and technical acumen.

One aspect of merit is that FOOD's operations have built-in sustainability, due, probably to the entrepreneurial approach adopted by the organisation. The Group characterised the head of FOOD as a "venture socialist", as a way of describing the organisation's business-like approach to its mission of creating employment opportunities through the inventive deployment of contemporary ICTs among

communities that possess few other technologies. It was evident to the Group that the personal relationships that had been engendered between FOOD and its clients contributed significantly to the capacity building and the sustainability of their operations. The Group felt that it had come upon a rare example of sustainable development communications that offered a model capable of being replicated in other, and wider, contexts.

As a caveat to the foregoing, the Group observed that the creative dynamism of FOOD's founder, as well as the uncommon combination of technical savvy and proactive flare in the creation of content, might generate problems of succession in FOOD itself, and that it also represented a challenge to replication efforts. Such individuals are hard to come by; presenting something of a threat to efforts aimed at promoting a wider model of implementing development communications. A final caution relates to the coming direction of technological development, which of course undermines all ICT implementations. Much of what FOOD represents technologically and financially has been carefully crafted around a specific set of communications technologies and regulations. Significant changes to both are foreseeable, yet the direction of such change is highly uncertain. How FOOD is likely to be affected by such changes will remain unclear until they occur and the organisation remains vulnerable as a result of such uncertainty.

MSSRF

In response to a direct request, the Group's evaluation addressed the section of the MSSRF project proposal that related to impact assessment. Given the genesis of the mission, this seemed wholly appropriate in order to provide a forum in which Group members could apply the learning received at the Val Morin event as well as carrying forward their combined experiences into their own projects. The first observation with regard to the MSSRF's project proposal related to the somewhat deterministic nature of the expected impact of the telecentres. This was manifested by the proposal to perform base-line surveys of key indicators and to repeat these at regular intervals during the period of telecentre operation in order to detect improvements and to attribute them to the telecentres. The Group now understands that the assessment of impacts and benefits in this field of work is not that straightforward. The focus on stories seems to have spawned a much richer picture than might be forthcoming from

surveys. The Group tentatively suggests that it seems possible that many of the benefits that are depicted by the stories could be missed by the surveys that are implied by the project proposal. That is not to suggest that the surveys have no value, rather that their value may lie in other directions, for example, identifying some information needs. Whilst acknowledging the generally received wisdom of before-and-after surveys, the Group tentatively proposes augmenting them with other, less deterministic, measures of impact.

Two further observations are offered with regard to surveys. Firstly, once a base-line survey has been conducted, the Group felt that it would be worthwhile to question whether subsequent surveys would add value to the initial data in a cost-effective manner. Before-and-after surveys usually gather the same data, when used in the sense of testing the effect of an experiment, yet it seems that, as with most implementations of information systems, the system itself changes the nature of the experiment and shifts the focus of the research question. Consequently, before-and-after surveys that have a rigid design run the risk of suffering from diminishing worth as the experiment proceeds. Accordingly, it might be more productive to evaluate the impact of the telecentres by assessing the original expectations and the baseline survey data against the newer success stories outlined here, and by devising fresh enquiries to further augment the stories with new empirical data.

Such an approach seems to embody the principles of action research by acknowledging the influence that the researchers' actions have upon the original research question and by adapting the research accordingly through successive iterations of action and reflection. One line of enquiry that the Group suggested, which might enrich the assessment of the telecentres' impact, could relate to something we might label as the users' "well-being", as a distinctive construct that goes beyond most of the economic benefits that surveys tend to concentrate on. An example from the stories could be the exam results, which of themselves have little economic value, but which clearly contribute to well-being as the villagers are prepared to queue up at the telecentre in order to get them as soon as possible.

A second, less problematic, observation with regard to surveys is the implication in the MSSRF project proposal that changes in attitudes are non-quantifiable. In fact,

there are many tried and tested instruments to measure attitudes and to quantify them, and it is probably feasible to apply them to the issues outlined in the proposal.

Another aspect of the project proposal that the Group was asked to address is raised by the project's expected outcome. The proposal lists a number of outcomes, such as improved expenditure of targeted public funds, increased exposure of rural youth to computers, increase in awareness among youth through multimedia training (sic), which seem to be problematic in terms of identifying and substantiating. How, for instance, can the expenditure of public funds be shown to have improved? Improved in what sense? Moreover, these outcomes could be described as means to an end rather than as ends in themselves. For example, how will the increased awareness among youths be translated into more tangible or more desirable benefits that contribute to well being? In one sense these predicted outcomes are too specific, in that they do not seem to focus on the ultimate objective, although they are helpful in specifying intermediate or facilitating objectives, but in another sense they are not specific enough, in that some are not easily measurable or capable of being demonstrably argued to have been achieved.

There is no criticism implied by these comments. The intention is to reshape the evaluation process so that it is capable of focusing more sharply on the valuable contributions that the telecentres are actually making to rural life. The point that possibly the Group is making is that the benefits that are emerging are not quite the same as those that were predicted, but they are nevertheless equally as desirable, perhaps, in some cases more so, than those that were. In such circumstances, it might be beneficial to acknowledge such uncertainty of outcomes at the outset and to demonstrate the capability of the project to tease out unpredictable benefits through the skilful and sensitive application of appropriate methods such as Action Research, Participatory Rural Appraisal, Rapid Rural Appraisal and Outcome Mapping.

Further comments relating to the MSSRF project relate to the need to engender sustainability of the telecentres if and when the research team pulls out, as well as the possibility of formulating a model for replications of the successes that have already been achieved. In this regard, the Group suggested that a defined strategy for disseminating the results of the research might be useful for fostering an international

movement towards standards of telecentre operation that could be built upon the notion of best practices. The Group concluded that the MSSRF telecentre project has a substantial contribution to make in this respect.

LESSONS LEARNED

FOOD

The most significant lesson learned from the experiences with FOOD relate to the business-like approach it adopts towards its operations, which appear to have the effect of building in sustainability right from the start. The organisation's entrepreneurial approach to development has the apparent effect of incorporating sustainability as an objective from the very beginning of any initiative, in much the same way as a businessman targets profits. Given the premium on sustainability in development, and the urgent need to mobilise mechanisms that are capable of sustaining the beneficial impacts of ICTs in development, FOOD seems to have a valuable lesson here for the entire telecentre movement.

MSSRF

The Group's overriding impression of the MSSRF telecentre initiative is that of an exemplar for most of the aspects of ICT-led development in rural locales. From the creative, sometimes ingenious, use of technology, to its relationships with the target communities, the Foundation demonstrates an admirable record of accomplishments. A further lesson for the benefit of the telecentre community at large might be for the Foundation to publicise more widely what it has achieved and for it to adopt more of a leadership role in the international telecentre community.

Telecentres for Rural Development

The success stories indicate in the depth and breadth of impact that ICTs have had within the target communities, that telecentres have the potential for contributing significantly to rural development. The challenges, as with all applications of ICTs, lie in understanding and sensitivity towards their contexts. In both projects, this has obtained through dedication and close engagement with the recipient communities, and this should come as no surprise to either development or IT practitioners. The lessons to be learned appear to relate to the combination of skills and capabilities that

has been bought to bear in each instance. Successful telecentres need a combination of technical expertise and social awareness, probably in equal measure. Whilst the corporate world has come to understand this, creating new professions which merge business subjects with IT in their quest for profits, perhaps the development world now needs to embrace IT in a closer relationship so that the benefits we have encountered in this mission can be propagated to a wider audience.

A further lesson from the success stories relates to their unpredictability. In many cases during the mission, the pattern of the emergence of benefits seemed to follow a "build-it-and-they-will-come" model, in that, whilst some of the benefits were predicted prior to implementing the telecentre, many were not. There is an important lesson here for IT professionals, and for their development clients, who are probably more accustomed to being required to define the outcome benefits of a system implementation in great detail before receiving authorisation to proceed with the investment or the work. Usually, the benefits will be known before the technology is installed. In the examples we have described here, the reverse seems to have been the case. The question arises then, is our ability to predict outcomes deficient in some way or is it more in the nature of the creativity and resourcefulness of individuals who have been empowered with access to information that we should not be expected to predict how they will conduct themselves with such new found capacities? Given the complexity of local contexts and the infinite potential for the value of information, the Group suggests that the latter is a more fitting interpretation, so that telecentre implementations should focus on empowerment as a target benefit of itself, on the basis that "when the water rises, all boats rise."

Telecentre evaluation

The Group's approach to evaluating the telecentres it visited was born out of necessity, given the limited time available for observing the operations of each and for interacting with their users. Nevertheless, the Group believes that it has learned the value of stories in particular and of qualitative data in general, in obtaining a reliable representation of the impact of telecentres. The context of the evaluation supported the approach, by allowing individuals to express themselves freely and by focussing special attention during each session on the women beneficiaries. The Group had every reason to believe that the stories they heard were genuine and were faithfully

transmitted through the translation process. However, we acknowledge that the evaluation, depending on its purpose, could in some ways be described as superficial. Evaluations, too, have their contexts, and for the purposes of this mission, the Group considers that the story approach was perfectly adequate. Evaluations that are required for other purposes could very well take another form. It would seem that the purpose of an evaluation might determine the balance of its mix between qualitative and/or quantitative methods.

Research Conduct

Some remarks are offered here which attempt to define some lessons learned regarding the research component of the mission, of the projects of each of the Group's members and of the objectives of the IDRC. It would seem from the experiences of the mission that telecentre research lends itself to methods that are both participatory and action-oriented. The requirements for close engagement with local communities as well as the unpredictable nature of the outcome benefits seem to dictate this. Accordingly, all the projects in the PANTLEG would benefit from an understanding of the philosophy and principals of participatory action research (PAR) which are adequately described in a number of sources. The IDRC is well positioned to further PAR as a research technique in telecentre-related research. Each of the PANTLEG projects offers a platform for the useful application of PAR and the reporting of intermediary outcomes as projects proceed through successive iterative cycles of action and reflection, followed by more action, and so on. Consequently, new knowledge can be reported before projects end so that the research community gains access to it earlier.

Replicability

The emergence of the question of replicability forms the final lesson that is still to be learned. The PANTLEG projects display a variety of differences along a number of diverse dimensions. They vary, of course, in their nationalities as well as in their motivation, structure, scope, methodologies and management. Yet they all share the common goal of rural development through ICTs. The outstanding lesson seems to lie in how each can replicate any successes that they achieve. Telecentre research can characterised as a grass-roots movement, involving mainly NGOs working within specific locales. A challenge appears to be emerging for organisations wishing to

influence governments as probably the only organisation capable of effecting widespread applications of telecentres on a national level.

FURTHER STUDIES

This report suggests a new PANAsia initiative aimed at joining the PANTLEG projects in a closer partnership for mutual benefit and for enhancing the capacity of the PANAsia programme to achieve its goals. The proposal seeks to exploit the synergy generated by the members of the mission by maintaining and accelerating its momentum towards the creation of new knowledge consonant with its objectives, with the objectives of each project and with those of the overall programme.

Accordingly, the Group proposes a series of events that will address certain issues that give common cause for concern, arising from the mission, the resolution of which will benefit from a co-ordinated and focused team effort, whereby sufficient differences exist between the projects to ensure a wide perspective of each, but where the wholly Asian focus will render the deliberations relevant for each.

The issues of telecentre use and operation which the group has identified as common causes of concern include the following:

Standards

The pioneering telecentre experiments are now emerging into an era of consolidation during which the process of translating best practices into common standards can begin. Consequently, the group wishes to participate in standard-setting consultations, both as contributors as well as learners. Standards relating to telecentre operation will usefully emerge in a range of diverse fields; language, technology, operational practices, evaluation, design, training, policy, etc.

Policy Environments

Successful telecentre pilots have emerged against widely differing policy environments. The relationship between government policy and telecentre success is not at all clear. The policy environments of Asian countries differ markedly with regard to ICTs, yet they all stand to gain from programmes for telecentre deployment.

Telecentres offer an ideal platform for cross-disciplinary, cross-sectoral, multi-agency, co-operation. Accordingly, they provide a suitable vehicle for mobilising public resources towards the formulation of national policies for rural IT and telecommunications. The diversity of the PANTLEG's projects can usefully contribute to the debate of how governments should respond to the telecentre phenomenon within the contexts of their own economies, cultures and demographics.

Cultural Contexts

Even within adjacent geographical areas, cultural variations between communities infringe upon success formulae that have been externally derived. Methodologies, techniques and personal skills are required that will tease out relevant cultural factors and render them capable of being parameterised in such a way that exponents are appropriately sensitised to their existence and to the potency of their influence.

Sharing

Despite the networked nature of telecentres, members of PANTLEG feel isolated from each other and they feel this isolation to be detrimental to the impact that their individual projects can achieve. The sharing experience of the India mission accelerated the learning of each in a short and concentrated period of time during which a number of valuable ideas, experiences and speculations were exchanged. Each member saw the India mission as the beginning of something rather than the end and they are each anxious to maintain the learning achieved and to extend it into the forthcoming phases of their own, and each others' projects.

Extending Capabilities

PANTLEG considers it has sufficient combined capability to usefully extend its operations to new clients, especially to NGOs. Such extensions are seen to be wholly compatible with PANAsia's objectives and could be operated so that they are additionally beneficial to existing projects. The Group foresees mechanisms for extending its existing client base for mutual benefit.

As a consequence of the above considerations, PANTLEG will propose a programme of joint projects, each with the following characteristics:

Provides joint benefit – for all participants, as well as for PANAsia.

Contains a research component – recognising that new knowledge is being created and that it should be disseminated.

Includes comparative evaluations – leveraging both the diversity and the similarities between projects as well as exploiting the combined contributions and synergies of the team.

Exchange of participants – to foster capacity building of the team as well as facilitating the other characteristics.

Addresses one or more key themes –

Sustainability

Replicability

Local language

Policy advocacy

NGO inclusion

Community identification for PANTLEG members

No budget proposals are included in this paper. That will be for the next stage of its development. The first proposed activity however is to repeat the Group's perceived success of the India mission with a similar mission to Mongolia in November 2000. In line with the India mission, this will result in a number of outcomes including a multimedia report and conference presentation as well as a publishable paper in a reputable journal.

CONCLUSIONS

Members of the team consider the mission to have been successful on several counts. Firstly, the objective of implementing the lessons learned from the Val Morin Workshop was accomplished. The team is better able to evaluate telecentre operations and it feels that it has demonstrated this capability to good effect. Secondly, the team considers it has advanced the objectives of the IDRC, in a modest way, by strengthening the capability of each member towards achieving desirable outcomes in their respective projects. Finally, the team believes that it has the potential to extend its influence beyond the immediate objectives through further collaboration that will; provide mutual support and capacity building; foster accelerated knowledge creation and dissemination; generate channels for advocacy

among home and regional policy bodies; consolidate divers experiences into wider opportunities for learning; and add impetus to research efforts directed at achieving development through ICTs.

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